

For  
Week Ending  
August 16, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE / HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: AUGUST 22, 1969 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS

## SALMONELLOSIS DUE TO IMPORTED BEEF - Maryland

An outbreak of salmonellosis occurred among approximately 100 persons attending a wedding reception in Wheaton, Maryland, on June 14, 1969. Thirty-three of 68 persons contacted reported onset of symptoms including diarrhea (70 percent), abdominal cramps (61 percent), nausea (48 percent), fever (48 percent), and vomiting (30 percent), 5 to 58 hours after the reception (mean 18 hours; median 16 hours). Stool specimens were obtained from two of 11 persons who contacted their physicians: one specimen was positive for *Salmonella welikada*.

Food specific attack rates implicated cooked beef as the vehicle of infection (Table 1). Samples of beef obtained from garbage cans at the site of the wedding reception, from the homes of several wedding guests, and

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from unopened, packed roasts were all positive for *S. welikada* and had high coliform counts.

The beef was imported on June 3 and processed by a firm in New York City, shipped to a distributor in Washington, D.C., on June 6, and delivered to a caterer on June 13. At the caterer's, it was refrigerated overnight and then sliced on Saturday morning, June 14. The caterer took it to the wedding reception, where it was served at

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	33rd WEEK ENDED		MEDIAN 1964 - 1968	CUMULATIVE, FIRST 33 WEEKS		
	August 16, 1969	August 17, 1968		1969	1968	MEDIAN 1964 - 1968
Aseptic meningitis	142	202	107	1,428	1,790	1,327
Brucellosis	2	5	7	115	132	155
Diphtheria	4	2	4	94	103	103
Encephalitis, primary:						
Arthropod-borne & unspecified	26	56	45	668	652	1,000
Encephalitis, post-infectious	8	8	8	221	343	550
Hepatitis, serum	116	103	643	3,337	2,694	25,367
Hepatitis, infectious	855	948		29,434	27,770	
Malaria	51	48	15	1,726	1,346	218
Measles (rubeola)	185	226	665	19,861	19,180	187,674
Meningococcal infections, total	29	26	26	2,272	1,895	1,895
Civilian	29	26	---	2,070	1,720	---
Military	---	---	---	202	175	---
Mumps	588	822	---	66,478	122,773	---
Poliomyelitis, total	---	---	1	9	38	38
Paralytic	---	---	1	8	38	38
Rubella (German measles)	336	321	---	48,035	42,826	---
Streptococcal sore throat & scarlet fever	4,355	4,354	4,079	290,216	287,963	287,963
Tetanus	5	3	7	92	92	138
Tularemia	2	3	5	90	126	126
Typhoid fever	6	9	8	178	204	250
Typhus, tick-borne (Rky. Mt. spotted fever)	16	32	14	325	196	189
Rabies in animals	53	54	81	2,302	2,327	2,902

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	3	Rabies in man:	1
Botulism:	11	Rubella congenital syndrome:	6
Leptospirosis: N.C.-1, N.Y. Ups.-1, S.C.-1	42	Trichinosis: N.Y. Ups.-1	154
Plague:	3	Typhus, murine: Ohio-1	32
Psittacosis:	23	Poliomyelitis, non-paralytic:	1

\*Delayed reports: Trichinosis: Me. 1  
Typhus, murine: Ohio delete 1  
Poliomyelitis, non-paralytic: Me. 1

## SALMONELLOSIS - (Continued from front page)

Table 1  
Food History Data from Persons at Wedding Reception, Wheaton, Maryland, June 14, 1969

Food	Group A Persons Who Ate Specified Food				Group B Persons Who Did Not Eat Specified Food			
	Ill	Not Ill	Total	Attack Rate (Percent)	Ill	Not Ill	Total	Attack Rate (Percent)
Turkey	20	20	40	50	13	15	28	46
Meat Balls	10	13	23	44	23	22	45	51
Potato Salad	21	21	42	50	12	14	26	46
Coleslaw	8	10	18	44	25	25	50	50
Roast Beef	32	15	47	68	1	20	21	5

a buffet from 6:20 to 11:15 p.m. Approximately 50 percent of the beef was not consumed and was given to wedding guests.

The New York firm had shipped smaller amounts of the beef to Virginia, Ohio, and Florida. These state health departments were notified, but, to date, no further isolations of *S. welikada* have been reported. Other control measures included the following: The Washington, D.C., food distributor voluntarily withheld the rest of the shipment from the market. The foreign review staff of the U.S. Department of Agriculture (USDA) was notified, and, in turn, notified the exporting country of the contaminated beef. The food processing procedure in New York was reviewed, microbiological samples were collected on June 27, and production was stopped for 1 week, while new processing methods were developed based on laboratory findings. Previously processed beef was reprocessed before release.

(Reported by Steven Lipson, M.D., Chief of Epidemiology, and James Robb, Jr., and H. Clayton Ervine, Environmental Health Services, Montgomery County Health Department; Harold J. Garber, M.D., Chief, Division of Communicable Diseases, and Edwin Swecker, Bacteriologist, Bureau of Laboratories, Maryland State Department of

Health; John E. Spaulding, D.V.M., Head, Toxicology Group, Technical Services Division, U.S. Department of Agriculture; Kenneth R. Lenington, Office of Associate Commissioner for Compliance, U.S. Food and Drug Administration; and an EIS Officer.)

## Editorial Comment:

Salmonella outbreaks due to contaminated imported meats are infrequently reported in the United States. The beef in this outbreak was probably contaminated prior to entry into this country in view of the fact that since the institution of the current salmonella surveillance program at the NCDC in 1962, isolations of *S. welikada* have not been reported from human or nonhuman sources in the United States. On the other hand, *S. welikada* is periodically isolated from the country from which the beef was imported.

It is likely that other human cases of salmonellosis were associated with the consumption of this contaminated beef, but since only approximately one out of 100 clinical cases of salmonellosis is seen by a physician and has a stool culture taken, it is not surprising that other cases have not been reported to NCDC.

The USDA has initiated procedures which should minimize the chances of recurrences of similar outbreaks.

## MURINE TYPHUS - Texas

From January through July 1969, 24 cases of murine typhus were reported from Texas (Table 2); for the comparable period in 1968, 9 cases were reported from Texas. The patients' symptoms included headache, fever, malaise, and weakness, and influenza was often considered in the differential diagnosis. The patients' sera showed titers to Proteus OX19 and the complement fixation test confirmed murine typhus. The patients ranged in age from 2 to 72 years (median 19 years; mean 24.5 years), and there were twice as many cases in females as in males (Table 3). Therapy with erythromycin in one case and tetracycline in all others resulted in complete recovery.

Most cases occurred in the Corpus Christi area or in the lower Rio Grande Valley (Table 1). Murine typhus is endemic in southern Texas and is apparently carried by the field rat. Most of the patients gave a history of flea

Table 2  
Cases of Murine Typhus by Month of Onset  
Texas - January-June 1969

Cases	Month
3	January
1	February
2	March
3	April
6	May
9	June

bites but denied contact with rats, although rats had been seen in the vicinity of their homes. Several patients admitted to being bitten by fleas from their pet cats, suggesting that house pets may be involved in the transmission of the disease to man.

Table 3  
Cases of Murine Typhus by Age and Sex  
Texas - January-July 1969

Age Group (Years)	Male	Female
<1-5	0	1
6-10	4	2
11-15	1	2
16-20	1	2
21-40	1	5
≥40	1	4
Total	8	16

(Reported by James E. Peavy, M.D., M.P.H., Commissioner of Health, M.S. Dickerson, M.D., Chief, Communi-

Table 3  
Cases of Murine Typhus by County  
Texas - January-July 1969

Cases	Counties
6	Nueces
11	Hidalgo
4	Cameron
1	Bell
1	Jim Hogg
1	Brooks

cable Disease Services, and J.V. Irans, D.Sc., Director, and Kinch C. Knolle, Serology Division, Laboratories, Texas State Department of Health; and an EIS Officer.)

#### INTERNATIONAL NOTES MALARIA - Ceylon\*

The recurrence of malaria in Ceylon, noted in the first months of 1968 (MMWR, Vol. 17, Nos. 11 and 16), continued throughout 1968 and extended into 1969. A total of 425,937 cases were reported during 1968 and 195,107 cases were reported for the first 3 months of 1969. Mortality has been low. Of the microscopically positive cases in the first quarter of 1969, 194,845 were due to *Plasmodium vivax*, 175 were due to *P. falciparum*, 2 were due to *P. malariae*, and 85 were mixed infections of *P. vivax* and *P. falciparum*.

The factors leading to the present epidemic appear to be: (1) the increasing occurrence from 1964 to 1967 of

*P. vivax* infections in areas of high transmission potential which developed due to the lack of control resources; (2) the abnormally low rainfall in the early months of 1968 which caused pooling in river beds, thus producing many ideal breeding sites for *Anopheles culicifacies* mosquitoes; (3) population movements associated with land development, gem mining, and pilgrimages in areas of high transmission potential; and (4) the absence of immunity after years of freedom from infection during the eradication efforts between 1945 and 1963.

\*Source: World Health Organization Weekly Epidemiological Record. 44(32):489, August 8, 1969.

#### DENGUE - Puerto Rico

The epidemic of dengue in Puerto Rico is continuing with 714 cases reported for the week ending August 16 (MMWR, Vol. 18, Nos. 27-30). For the weeks ending July 26, August 2, and August 9, totals of 1,455 cases, 1,676 cases, and 1,758 cases, respectively, were reported.

Over 500 cases of dengue-like illness have been observed in four areas selected for intensive surveillance to evaluate the effect of aerial spraying (Figure 1, page 292). In Cortes, ultralow volume Malathion\* spraying was initiated during a period of high incidence and was followed by a decrease in cases. In Buenavista and Parcela 400, where spraying was started later in the epidemic, the observed continuing reduction in cases may be unrelated to spraying. Although Maria Jimenez was not sprayed, *Aedes aegypti* mosquito indices as well as case rates were lower than in the other three areas during the entire study period. The overall attack rates for the

9 weeks of study in Buenavista and Cortes (22 cases per 100 population and 26 cases per 100 population) are lower than the attack rate in Parcela 400 (45 cases per 100 population), suggesting that spraying may have interrupted the further progress of the epidemic in these two areas.

(Reported by Dr. Ernesta Colan-Yardan, Secretary of Health, Dr. Raphael Carrea-Caronas, Auxiliary Secretary of Health for Preventive Medicine, Dr. Luis Mainardi, Chief, Communicable Disease Control Program, and Dr. Angel Alberta Calan, Director, Institute of Laboratories of Health, Puerto Rico Department of Health; and a team from NCDC.)

\*Trade names are provided for identification only, and inclusion does not imply endorsement by the Public Health Service or the United States Department of Health, Education, and Welfare.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED  
AUGUST 16, 1969 AND AUGUST 17, 1968 (33rd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post- Infectious	Serum	Infectious			
				1969	1968	1969	1969	1968	1969	1968	1969
UNITED STATES...	142	2	4	26	56	8	116	855	948	51	1,726
NEW ENGLAND.....	-	-	-	1	2	1	1	91	82	1	62
Maine*.....	-	-	-	-	-	-	-	-	5	-	4
New Hampshire.....	-	-	-	-	-	-	-	5	2	-	2
Vermont.....	-	-	-	-	-	-	-	1	-	-	-
Massachusetts.....	-	-	-	-	-	-	-	55	36	1	42
Rhode Island.....	-	-	-	1	2	-	1	20	29	-	3
Connecticut.....	-	-	-	-	-	1	-	10	10	-	11
MIDDLE ATLANTIC.....	43	-	-	3	14	3	34	146	140	10	200
New York City.....	2	-	-	1	-	-	22	59	58	1	17
New York, up-State.....	10	-	-	1	-	2	1	31	26	2	31
New Jersey*.....	5	-	-	1	11	-	7	19	23	5	80
Pennsylvania.....	26	-	-	-	3	1	4	37	33	2	72
EAST NORTH CENTRAL...	15	-	-	9	21	2	12	132	140	4	171
Ohio.....	1	-	-	5	18	-	3	32	53	-	17
Indiana.....	3	-	-	1	-	1	-	2	8	1	15
Illinois.....	9	-	-	-	2	1	-	32	31	3	101
Michigan.....	2	-	-	3	-	-	9	60	36	-	37
Wisconsin.....	-	-	-	-	1	-	-	6	12	-	1
WEST NORTH CENTRAL...	22	2	-	4	-	2	2	31	58	4	115
Minnesota.....	17	-	-	-	-	1	-	2	30	-	7
Iowa.....	-	1	-	1	-	1	-	6	6	-	9
Missouri.....	2	-	-	1	-	-	-	9	13	2	31
North Dakota.....	-	1	-	-	-	-	-	-	1	-	3
South Dakota.....	-	-	-	-	-	-	-	7	1	-	-
Nebraska.....	2	-	-	-	-	-	-	1	2	-	3
Kansas.....	1	-	-	2	-	-	2	6	5	2	62
SOUTH ATLANTIC.....	20	-	1	2	2	-	6	59	104	4	484
Delaware.....	-	-	-	-	-	-	-	2	3	1	3
Maryland.....	11	-	-	-	-	-	1	13	15	3	26
Dist. of Columbia..	-	-	-	-	-	-	2	-	-	-	1
Virginia.....	2	-	-	-	-	-	-	6	7	-	16
West Virginia.....	-	-	-	1	-	-	-	7	6	-	-
North Carolina.....	-	-	1	-	-	-	-	2	3	-	223
South Carolina.....	3	-	-	-	-	-	-	10	3	-	42
Georgia.....	-	-	-	-	-	-	-	1	27	-	146
Florida.....	4	-	-	1	2	-	3	18	40	-	25
EAST SOUTH CENTRAL...	8	-	-	3	3	-	4	48	56	-	67
Kentucky.....	-	-	-	-	-	-	-	9	21	-	54
Tennessee.....	6	-	-	1	3	-	1	19	19	-	-
Alabama.....	1	-	-	1	-	-	3	1	1	-	11
Mississippi.....	1	-	-	1	-	-	-	19	15	-	2
WEST SOUTH CENTRAL...	18	-	3	-	4	-	6	72	56	11	96
Arkansas.....	-	-	-	-	2	-	-	-	3	-	8
Louisiana*.....	2	-	-	-	2	-	2	19	16	3	36
Oklahoma.....	6	-	-	-	-	-	-	4	1	7	37
Texas*.....	10	-	3	-	-	-	4	49	36	1	15
MOUNTAIN.....	1	-	-	-	-	-	-	52	40	2	121
Montana.....	-	-	-	-	-	-	-	-	3	-	3
Idaho.....	1	-	-	-	-	-	-	1	5	-	3
Wyoming.....	-	-	-	-	-	-	-	1	-	-	-
Colorado.....	-	-	-	-	-	-	-	16	-	2	102
New Mexico.....	-	-	-	-	-	-	-	4	4	-	7
Arizona.....	-	-	-	-	-	-	-	22	20	-	1
Utah.....	-	-	-	-	-	-	-	5	8	-	1
Nevada.....	-	-	-	-	-	-	-	3	-	-	4
PACIFIC.....	15	-	-	4	10	-	51	224	272	15	410
Washington.....	3	-	-	1	1	-	-	13	25	-	5
Oregon.....	-	-	-	-	-	-	1	17	18	1	9
California.....	11	-	-	2	9	-	50	188	226	14	312
Alaska.....	-	-	-	1	-	-	-	1	-	-	2
Hawaii.....	1	-	-	-	-	-	-	5	3	-	82
Puerto Rico.....	-	-	-	-	-	-	-	43	33	-	2

\*Delayed reports: Hepatitis, infectious: Me, 4, Tex. delete 1  
Malaria: N.J. delete 1, La. delete 1



TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDED  
AUGUST 16, 1969 AND AUGUST 17, 1968 (33rd WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA
	1969	Cumulative		1969	Cumulative			Total	Paralytic		
		1969	1968		1969	1968			1969	1969	
UNITED STATES...	185	19,861	19,180	29	2,272	1,895	588	-	-	8	336
NEW ENGLAND.....	9	1,082	1,139	1	80	101	103	-	-	1	27
Maine*.....	-	7	37	-	6	6	4	-	-	-	1
New Hampshire.....	-	238	141	-	2	7	4	-	-	-	-
Vermont.....	-	3	2	-	-	1	23	-	-	-	-
Massachusetts*.....	-	208	354	-	33	48	22	-	-	-	7
Rhode Island.....	1	23	5	1	9	8	12	-	-	-	6
Connecticut.....	8	603	600	-	30	31	38	-	-	1	13
MIDDLE ATLANTIC.....	55	7,397	3,899	11	371	341	71	-	-	-	34
New York City.....	18	4,862	1,994	-	73	69	65	-	-	-	11
New York, Up-State.....	5	591	1,210	5	66	59	NN	-	-	-	20
New Jersey.....	12	873	585	1	150	122	6	-	-	-	1
Pennsylvania.....	20	1,071	110	5	82	91	NN	-	-	-	2
EAST NORTH CENTRAL...	40	2,099	3,706	5	312	227	141	-	-	-	95
Ohio.....	6	367	289	1	117	62	8	-	-	-	6
Indiana.....	-	465	653	-	34	27	32	-	-	-	6
Illinois.....	16	479	1,356	3	44	51	18	-	-	-	6
Michigan.....	8	238	260	1	95	67	38	-	-	-	49
Wisconsin.....	10	550	1,148	-	22	20	45	-	-	-	28
WEST NORTH CENTRAL...	-	511	378	-	116	101	4	-	-	1	6
Minnesota.....	-	5	16	-	25	24	2	-	-	-	-
Iowa.....	-	328	96	-	15	6	1	-	-	-	4
Missouri.....	-	22	81	-	51	32	1	-	-	-	1
North Dakota.....	-	11	131	-	-	3	-	-	-	-	1
South Dakota.....	-	3	4	-	1	5	NN	-	-	-	-
Nebraska.....	-	135	40	-	9	6	-	-	-	-	-
Kansas.....	-	7	10	-	15	25	-	-	-	1	-
SOUTH ATLANTIC.....	26	2,459	1,476	-	395	385	50	-	-	1	19
Delaware.....	-	373	15	-	8	8	5	-	-	-	-
Maryland.....	9	74	94	-	36	28	5	-	-	-	4
Dist. of Columbia..	-	-	6	-	9	14	-	-	-	-	1
Virginia.....	-	882	293	-	49	31	13	-	-	-	-
West Virginia.....	6	185	280	-	18	10	21	-	-	-	9
North Carolina.....	5	313	281	-	66	76	NN	-	-	-	-
South Carolina.....	-	112	12	-	55	56	4	-	-	-	-
Georgia.....	-	1	4	-	69	73	-	-	-	-	-
Florida.....	6	519	491	-	85	89	2	-	-	1	5
EAST SOUTH CENTRAL...	1	107	487	1	140	162	42	-	-	1	27
Kentucky*.....	1	63	99	-	49	65	6	-	-	-	5
Tennessee.....	-	17	61	1	53	52	24	-	-	-	20
Alabama.....	-	4	93	-	23	24	11	-	-	1	1
Mississippi.....	-	23	234	-	15	21	1	-	-	-	1
WEST SOUTH CENTRAL...	33	4,390	4,687	6	306	300	42	-	-	4	38
Arkansas.....	-	16	2	-	29	20	-	-	-	-	-
Louisiana.....	-	120	11	1	80	85	-	-	-	-	-
Oklahoma.....	-	136	111	-	29	49	-	-	-	-	-
Texas.....	33	4,118	4,563	5	168	146	42	-	-	4	38
MOUNTAIN.....	17	818	968	-	44	29	46	-	-	-	33
Montana.....	-	16	58	-	9	3	5	-	-	-	-
Idaho.....	-	89	20	-	8	11	-	-	-	-	-
Wyoming.....	-	-	51	-	-	-	-	-	-	-	-
Colorado.....	-	136	498	-	7	10	4	-	-	-	8
New Mexico.....	-	241	96	-	6	-	11	-	-	-	1
Arizona.....	17	327	219	-	10	1	20	-	-	-	20
Utah.....	-	8	21	-	2	1	6	-	-	-	4
Nevada.....	-	1	5	-	2	3	-	-	-	-	-
PACIFIC.....	4	998	2,440	5	508	249	89	-	-	-	57
Washington.....	1	59	515	1	54	37	9	-	-	-	3
Oregon.....	-	198	496	1	15	19	3	-	-	-	3
California.....	3	698	1,392	3	418	180	53	-	-	-	34
Alaska.....	-	8	2	-	11	2	5	-	-	-	3
Hawaii.....	-	35	35	-	10	11	19	-	-	-	14
Puerto Rico.....	43	1,404	388	2	19	19	25	-	-	-	15

\*Delayed reports: Measles: Mass. delete 1  
Mumps: Me. 2  
Rubella: Me. 9, Ky. delete 6

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDED  
AUGUST 16, 1969 AND AUGUST 17, 1968 (33rd WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969
UNITED STATES...	4,355	5	92	2	90	6	178	16	325	53	2,302
NEW ENGLAND.....	578	-	-	-	14	1	7	-	-	1	18
Maine.....	4	-	-	-	-	-	1	-	-	1	6
New Hampshire.....	30	-	-	-	-	-	-	-	-	-	4
Vermont.....	41	-	-	-	14	-	-	-	-	-	2
Massachusetts.....	59	-	-	-	-	-	4	-	-	-	1
Rhode Island.....	71	-	-	-	-	-	1	-	-	-	-
Connecticut.....	373	-	-	-	-	1	1	-	-	-	5
MIDDLE ATLANTIC.....	195	-	13	-	4	2	19	4	34	6	108
New York City.....	12	-	6	-	1	1	9	-	-	-	-
New York, Up-State.....	161	-	3	-	3	-	5	-	5	6	101
New Jersey.....	NN	-	2	-	-	1	1	3	9	-	-
Pennsylvania.....	22	-	2	-	-	-	4	1	20	-	7
EAST NORTH CENTRAL...	258	1	12	-	7	-	20	1	1	3	154
Ohio.....	59	-	1	-	-	-	7	-	-	-	44
Indiana.....	72	-	-	-	1	-	-	-	-	-	42
Illinois.....	41	-	7	-	2	-	9	1	1	-	26
Michigan.....	49	1	4	-	-	-	4	-	-	-	5
Wisconsin.....	37	-	-	-	4	-	-	-	-	3	37
WEST NORTH CENTRAL...	171	1	7	1	12	-	8	-	8	7	432
Minnesota.....	5	-	2	-	-	-	3	-	-	3	112
Iowa.....	33	-	-	-	-	-	-	-	7	-	62
Missouri.....	4	-	1	1	8	-	3	-	-	1	111
North Dakota.....	62	-	-	-	-	-	-	-	-	-	55
South Dakota.....	4	-	-	-	-	-	-	-	1	-	24
Nebraska.....	5	-	-	-	1	-	1	-	-	1	11
Kansas.....	58	1	4	-	3	-	1	-	-	2	57
SOUTH ATLANTIC.....	455	-	18	-	20	-	30	5	187	15	590
Delaware.....	3	-	-	-	-	-	2	-	3	-	-
Maryland.....	45	-	1	-	-	-	4	1	41	-	1
Dist. of Columbia..	-	-	2	-	-	-	1	1	1	-	-
Virginia.....	95	-	-	-	4	-	-	2	56	7	304
West Virginia.....	125	-	1	-	2	-	1	-	5	3	90
North Carolina.....	NN	-	2	-	5	-	6	-	45	-	4
South Carolina.....	38	-	1	-	2	-	2	1	24	-	-
Georgia.....	5	-	2	-	3	-	7	-	12	3	57
Florida.....	144	-	9	-	4	-	7	-	-	2	134
EAST SOUTH CENTRAL...	981	-	15	-	9	3	20	3	40	2	337
Kentucky.....	69	-	6	-	-	1	3	1	6	2	178
Tennessee.....	670	-	4	-	8	2	14	2	33	-	114
Alabama.....	103	-	4	-	-	-	1	-	1	-	42
Mississippi.....	139	-	1	-	1	-	2	-	-	-	3
WEST SOUTH CENTRAL...	478	1	17	1	16	-	22	3	36	9	321
Arkansas.....	-	-	1	-	1	-	10	-	6	-	24
Louisiana.....	1	-	6	-	4	-	2	-	-	3	26
Oklahoma.....	4	-	1	-	6	-	1	-	23	-	46
Texas.....	473	1	9	1	5	-	9	3	7	6	225
MOUNTAIN.....	907	1	3	-	8	-	22	-	14	5	104
Montana.....	26	-	1	-	-	-	-	-	-	-	-
Idaho.....	111	-	-	-	-	-	3	-	4	-	-
Wyoming.....	5	-	-	-	2	-	5	-	-	-	50
Colorado.....	435	1	2	-	-	-	3	-	8	-	3
New Mexico.....	178	-	-	-	1	-	5	-	-	2	13
Arizona.....	76	-	-	-	-	-	5	-	-	-	22
Utah.....	76	-	-	-	5	-	-	-	2	1	4
Nevada.....	-	-	-	-	-	-	1	-	-	2	12
PACIFIC.....	332	1	7	-	-	-	30	-	5	5	238
Washington.....	169	-	1	-	-	-	1	-	3	-	3
Oregon.....	65	-	-	-	-	-	6	-	-	1	3
California.....	---	1	6	-	-	-	23	-	2	4	232
Alaska.....	24	-	-	-	-	-	-	-	-	-	-
Hawaii.....	74	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	-	-	4	-	-	1	6	-	-	2	20

\*Delayed reports: SST: Me. 3, S.C. 19

# Morbidity and Mortality Weekly Report

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Week No.

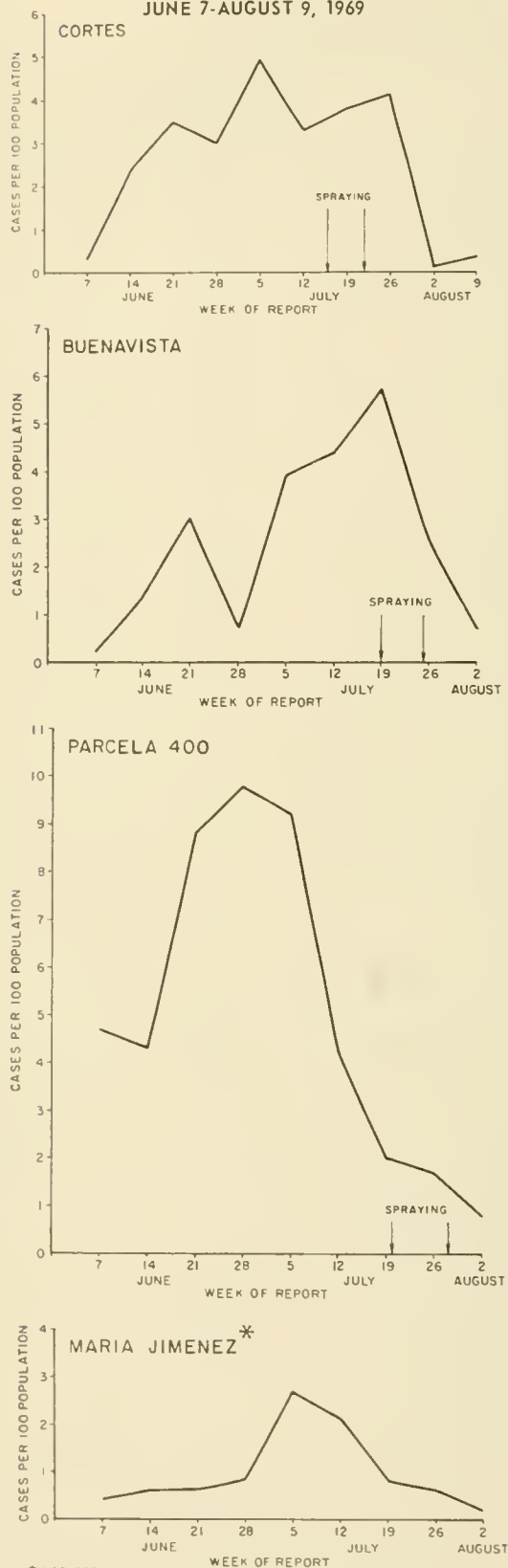
TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED AUGUST 16, 1969

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(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
NEW ENGLAND:	671	397	35	33	SOUTH ATLANTIC:	1,167	571	41	61
Boston, Mass.-----	218	118	7	9	Atlanta, Ga.-----	119	54	3	12
Bridgeport, Conn.-----	42	29	2	1	Baltimore, Md.-----	245	110	4	12
Cambridge, Mass.-----	21	11	6	-	Charlotte, N. C.-----	38	14	1	1
Fall River, Mass.-----	17	13	-	-	Jacksonville, Fla.-----	100	38	-	9
Hartford, Conn.-----	41	20	3	5	Miami, Fla.-----	102	60	-	3
Lowell, Mass.-----	27	21	1	1	Norfolk, Va.-----	53	27	5	3
Lynn, Mass.-----	22	15	1	-	Richmond, Va.-----	78	34	5	6
New Bedford, Mass.-----	26	20	1	1	Savannah, Ga.-----	29	9	2	1
New Haven, Conn.-----	56	29	2	6	St. Petersburg, Fla.-----	109	86	6	3
Providence, R. I.-----	61	33	4	4	Tampa, Fla.-----	72	45	6	3
Somerville, Mass.-----	5	5	-	-	Washington, D. C.-----	182	80	7	6
Springfield, Mass.-----	49	27	4	3	Wilmington, Del.-----	40	14	2	2
Waterbury, Conn.-----	25	16	-	2					
Worcester, Mass.-----	61	40	4	1	EAST SOUTH CENTRAL:	657	351	31	42
MIDDLE ATLANTIC:	3,160	1,815	103	158	Birmingham, Ala.-----	116	54	2	7
Albany, N. Y.-----	55	30	-	-	Chattanooga, Tenn.-----	55	23	5	10
Allentown, Pa.-----	36	26	2	2	Knoxville, Tenn.-----	45	32	4	1
Buffalo, N. Y.-----	104	72	-	3	Louisville, Ky.-----	130	76	13	7
Camden, N. J.-----	51	29	1	3	Memphis, Tenn.-----	135	58	1	10
Elizabeth, N. J.-----	36	21	-	3	Mobile, Ala.-----	58	34	1	3
Erie, Pa.-----	34	22	-	2	Montgomery, Ala.-----	30	23	4	-
Jersey City, N. J.-----	57	33	9	5	Nashville, Tenn.-----	88	51	1	4
Newark, N. J.-----	76	34	2	2	WEST SOUTH CENTRAL:	1,130	584	32	66
New York City, N. Y.-----	1,617	927	61	74	Austin, Tex.-----	35	20	4	2
Paterson, N. J.-----	27	9	-	1	Baton Rouge, La.-----	64	29	2	3
Philadelphia, Pa.-----	502	269	7	22	Corpus Christi, Tex.-----	37	14	1	1
Pittsburgh, Pa.-----	147	73	4	13	Dallas, Tex.-----	162	74	3	14
Reading, Pa.-----	43	27	2	4	El Paso, Tex.-----	48	26	6	5
Rochester, N. Y.-----	115	74	4	8	Fort Worth, Tex.-----	81	39	1	9
Schenectady, N. Y.-----	32	17	3	3	Houston, Tex.-----	230	113	4	15
Scranton, Pa.-----	38	20	-	1	Little Rock, Ark.-----	52	34	4	2
Syracuse, N. Y.-----	94	59	3	8	New Orleans, La.-----	141	78	2	1
Trenton, N. J.-----	35	24	2	3	Oklahoma City, Okla.-----	88	45	-	6
Utica, N. Y.-----	32	25	3	-	San Antonio, Tex.-----	101	55	1	2
Yonkers, N. Y.-----	29	24	-	1	Shreveport, La.-----	43	27	1	4
EAST NORTH CENTRAL:	2,443	1,392	63	104	Tulsa, Okla.-----	48	30	3	2
Akron, Ohio-----	47	28	1	-	MOUNTAIN:	471	270	19	20
Canton, Ohio-----	43	31	-	3	Albuquerque, N. Mex.-----	43	21	3	4
Chicago, Ill.-----	660	363	21	21	Colorado Springs, Colo.-----	32	17	5	3
Cincinnati, Ohio-----	157	92	-	8	Denver, Colo.-----	129	76	4	2
Cleveland, Ohio-----	181	97	2	9	Ogden, Utah-----	15	7	-	2
Columbus, Ohio-----	121	64	-	5	Phoenix, Ariz.-----	116	64	3	3
Dayton, Ohio-----	93	49	3	4	Pueblo, Colo.-----	11	10	1	-
Detroit, Mich.-----	344	205	8	19	Salt Lake City, Utah-----	57	38	1	3
Evansville, Ind.-----	61	36	2	1	Tucson, Ariz.-----	68	37	2	3
Flint, Mich.-----	52	24	8	5	PACIFIC:	1,563	932	40	62
Fort Wayne, Ind.-----	36	25	2	2	Berkeley, Calif.-----	21	17	1	-
Gary, Ind.-----	22	7	4	2	Fresno, Calif.-----	51	35	-	-
Grand Rapids, Mich.-----	42	24	2	2	Glendale, Calif.-----	22	17	-	-
Indianapolis, Ind.-----	152	82	1	8	Honolulu, Hawaii-----	37	19	3	3
Madison, Wis.-----	33	21	4	-	Long Beach, Calif.-----	107	66	1	2
Milwaukee, Wis.-----	139	88	1	1	Los Angeles, Calif.-----	455	281	8	19
Peoria, Ill.-----	30	20	-	1	Oakland, Calif.-----	105	45	1	8
Rockford, Ill.-----	33	18	2	-	Pasadena, Calif.-----	46	31	2	1
South Bend, Ind.-----	43	20	1	3	Portland, Oreg.-----	126	77	2	4
Toledo, Ohio-----	100	64	1	7	Sacramento, Calif.-----	63	36	1	3
Youngstown, Ohio-----	54	34	-	3	San Diego, Calif.-----	113	62	5	8
WEST NORTH CENTRAL:	805	473	32	54	San Francisco, Calif.-----	162	90	5	4
Des Moines, Iowa-----	43	29	1	1	San Jose, Calif.-----	43	27	8	-
Duluth, Minn.-----	21	12	6	1	Seattle, Wash.-----	133	77	3	8
Kansas City, Kans.-----	56	27	6	7	Spokane, Wash.-----	59	39	-	2
Kansas City, Mo.-----	122	76	1	10	Tacoma, Wash.-----	20	13	-	-
Lincoln, Nebr.-----	29	21	1	1	Total	12,067	6,785	396	600
Minneapolis, Minn.-----	102	59	4	9	Cumulative Totals				
Omaha, Nebr.-----	75	37	2	7	including reported corrections for previous weeks				
St. Louis, Mo.-----	231	135	9	12	All Causes, All Ages -----	435,660			
St. Paul, Minn.-----	74	44	2	4	All Causes, Age 65 and over-----	250,226			
Wichita, Kans.-----	52	33	-	2	Pneumonia and Influenza, All Ages-----	21,102			
					All Causes, Under 1 Year of Age-----	20,204			

Figure 1  
DENGUE-LIKE ILLNESS IN RELATION TO  
AERIAL SPRAYING - PUERTO RICO  
JUNE 7-AUGUST 9, 1969



THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 18,500 IS PUBLISHED AT THE NATIONAL COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA.

DIRECTOR, NATIONAL COMMUNICABLE DISEASE CENTER

CHIEF, EPIDEMIOLOGY PROGRAM

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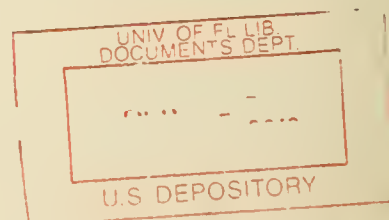
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MORBIDITY AND MORTALITY WEEKLY REPORT

ATLANTA, GEORGIA 30333

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE NCDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES AT CLOSE OF BUSINESS ON FRIDAY; COMPILED DATA ON A NATIONAL BASIS ARE OFFICIALLY RELEASED TO THE PUBLIC ON THE SUCCEEDING FRIDAY.

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